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Mark C. Pickering
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San Francisco, CA 94105

EXAMINER

GELAGAY, SHEWAYE

ART UNIT	PAPER NUMBER
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2133

DATE MAILED: 01/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/981,501

Applicant(s)

STEIN, HOWARD

Examiner

Shewaye Gelagay

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/17/01, 12/4/02, 4/04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-20 have been examined.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Atalla United States Letter Patent Number 5,960,086 ('086) in view of Atalla United States Letter Patent Number 6,088,449 ('449)

As per claim 1:

Atalla ('086) discloses a method of forming an encryption key (Col. 12, line 16) that has a number of bytes, the method comprising the steps of:

reading a sequence of bytes from a memory, (see Figure 22, and Col. 11, lines 63-67)

Atalla ('086) does not explicitly disclose a method wherein the sequence of bytes having a number of bytes that is greater than the number of bytes in the encryption key; and reducing the number of bytes in the sequence of bytes to be equal to the number of bytes in the encryption key.

Atalla ('449) in analogous art, however, discloses a method wherein:

the sequence of bytes having a number of bytes that is greater than the number of bytes in the encryption key; (Col. 8, lines 32-33; an encryption key shorter than the message to encrypt the message) and

reducing the number of bytes in the sequence of bytes to be equal to the number of bytes in the encryption key. (Col. 8, lines 39-40; the key is used to encrypt one message segment, equal to the length to the key, at a time)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the method disclosed by Atalla ('086) to include a method wherein the sequence of bytes having a number of bytes that is greater than the number of bytes in the encryption key; and reducing the number of bytes in the sequence of bytes to be equal to the number of bytes in the encryption key. This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so, as suggested by, Atalla ('449) (Col. 8, line 42) in order to provide a method that is useful for multi-media applications. This way, for any message length unbreakable security is obtained when the key length equals the message length.

As per claim 15:

Atalla ('086) and Atalla ('449) teach all the subject matter as discussed above. In addition, Atalla ('449) further discloses a method wherein the number of bytes in the sequence of bytes is a multiple of the number of bytes in the encryption key. (Col. 8, lines 34-35; the encryption key or K bytes is used to encrypt a message of many times

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K bytes)

As per claim 19:

Atalla ('086) discloses an apparatus that forms an encryption key (Col. 12, line 16) that has a number of bytes, the apparatus comprising:

means for reading a sequence of bytes from a memory, (see Figure 22, and Col. 11, lines 63-67)

Atalla ('086) does not explicitly disclose the sequence of bytes having a number of bytes that is greater than the number of bytes in the encryption key; and means for reducing the number of bytes in the sequence of bytes to be equal to the number of bytes in the encryption key.

Atalla ('449) in analogous art, however, discloses a method wherein:

the sequence of bytes having a number of bytes that is greater than the number of bytes in the encryption key; (Col. 8, lines 32-33; an encryption key shorter than the message to encrypt the message) and

reducing the number of bytes in the sequence of bytes to be equal to the number of bytes in the encryption key. (Col. 8, lines 39-40; the key is used to encrypt one message segment, equal to the length to the key, at a time)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the method disclosed by Atalla ('086) to include a method a method wherein the sequence of bytes having a number of bytes that is greater than the number of bytes in the encryption key; and reducing the number of bytes in the sequence of bytes to be equal to the number of bytes in the encryption

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key. This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so, as suggested by, Atalla ('449) (Col. 8, line 42) in order to provide a method that is useful for multi-media applications. This way, for any message length unbreakable security is obtained when the key length equals the message length.

4. Claims 2-6, 8, 10-11, 13, 16-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Atalla United States Letter Patent Number 5,960,086 ('086) in view of Atalla United States Letter Patent Number 6,088,449 ('449) further in view of Satterfield United States Letter Patent Number 6,128,386.

As per claim 2 and 16:

Atalla ('086) and Atalla ('449) teach all the subject matter as discussed above. Both references do not explicitly disclose a method wherein the reducing step further includes the steps of: assigning each byte in the sequence of bytes to one of a number of groups so that each group has one or more bytes, the number of groups being equal to the number of bytes in the encryption key; and reducing the number of bytes in each group to a single byte.

Satterfield in analogous art, however, discloses a method wherein the reducing step further includes the steps of:

assigning each byte in the sequence of bytes to one of a number of groups so that each group has one or more bytes, the number of groups being equal to the number of bytes in the encryption key; (Col. 5, line 65; digits of A' and B' are combined) and

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reducing the number of bytes in each group to a single byte. (Col. 5, line 66;
resulting in digits C')

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the method disclosed by Atalla ('086) and ('449) to include a method wherein assigning each byte in the sequence of bytes to one of a number of groups so that each group has one or more bytes, the number of groups being equal to the number of bytes in the encryption key; and reducing the number of bytes in each group to a single byte. This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so, as suggested by, Satterfield (Col. 3, lines 51-52) in order to provide a method that does not depend upon the use of thesaurus's and/or synonyms and/or other forms of look-up tables.

As per claim 3:

Atalla ('086), Atalla ('449) and Satterfield teach all the subject matter as discussed above. In addition, Satterfield further discloses a method wherein the reducing the number of bytes in each group to one byte step includes the steps of:

determining a base-N value for each byte in a group; (Col. 4, line 35; conversion of a binary number to j digits (base n))

summing together the base-N value of each byte in the group to form a base-N summed value; (Col. 4, line 40; ... when done the result is in sum) and

dividing the base-N summed value by the number of bytes in the group to determine a base-N average value, a base-2 representation of the base-N average

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value defining the single byte. (Col. 4, lines 38-39; the digits of a number (base n) are converted back to binary)

As per claim 4:

Atalla ('086), Atalla ('449) and Satterfield teach all the subject matter as discussed above. In addition, Satterfield further discloses a method wherein the base-N is base-10. (Col. 4, lines 46-48).

As per claim 5 and 10:

Atalla ('086) and Atalla ('449) teach all the subject matter as discussed above. Both references do not explicitly disclose a method forming the sequence of bytes; and storing the sequence of bytes in the memory.

Satterfield in analogous art, however, discloses a method comprising the steps of:

forming the sequence of bytes; (Col. 5, lines 59-67) and
storing the sequence of bytes in the memory. (Col. 6, lines 4-12)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the method disclosed by Atalla ('086) and ('449) to include a method wherein assigning each byte in the sequence of bytes to one of a number of groups so that each group has one or more bytes, the number of groups being equal to the number of bytes in the encryption key; and reducing the number of bytes in each group to a single byte. This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so, as suggested by, Satterfield (Col. 3, lines 54-56) in order to provide a scheme wherein

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the presentation of a character in one number base is transformed into a corresponding representation in another number base.

As per claim 6 and 11:

Atalla ('086), Atalla ('449) and Satterfield teach all the subject matter as discussed above. In addition, Satterfield further discloses a method wherein the sequence of bytes is formed by digitizing a unique image. (Col. 5, lines 27-30)

As per claim 8 and 13:

Atalla ('086), Atalla ('449) and Satterfield teach all the subject matter as discussed above. In addition, Satterfield further discloses a method wherein the sequence of bytes is formed by digitizing a recording of a unique sound event. (Col. 5, lines 7-11)

As per claim 17:

Atalla ('086), Atalla ('449) and Satterfield teach all the subject matter as discussed above. In addition, Satterfield further discloses a method comprising the steps of:

forming the sequence of bytes by digitizing a unique image; (Col. 5, lines 27-30)
and

storing the sequence of bytes in the memory. (Col. 5, lines 24-26)

As per claim 18:

Atalla ('086), Atalla ('449) and Satterfield teach all the subject matter as discussed above. In addition, Satterfield further discloses a method comprising the steps of:

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forming the sequence of bytes by digitizing a unique sound event; (Col. 5, lines 7-11) and

storing the sequence of bytes in the memory. (Col. 5, lines 31-32)

As per claim 20:

Atalla ('086) and Atalla ('449) teach all the subject matter as discussed above.

Both references do not explicitly disclose an apparatus that includes: means for assigning each byte in the sequence of bytes to one of a number of groups so that each group has one or more bytes, the number of groups being equal to the number of bytes in the encryption key; and means for reducing the number of bytes in each group to a single byte.

Satterfield in analogous art, however, discloses an apparatus wherein the means for reducing includes:

means for assigning each byte in the sequence of bytes to one of a number of groups so that each group has one or more bytes, the number of groups being equal to the number of bytes in the encryption key; (Col. 5, lines 65; digits of A' and B' are combined) and

means for reducing the number of bytes in each group to a single byte. (Col. 5, lines 66; ...resulting in digits C' expressed in number base N.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the method disclosed by Atalla ('086) and ('449) to include a method wherein assigning each byte in the sequence of bytes to one of a number of groups so that each group has one or more bytes, the number of groups

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being equal to the number of bytes in the encryption key; and reducing the number of bytes in each group to a single byte. This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so, as suggested by, Satterfield (Col. 3, lines 51-52) in order to provide a method that does not depend upon the use of thesaurus's and/or synonyms and/or other forms of look-up tables.

5. Claims 7, 9, 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Atalla United States Letter Patent Number 5,960,086 ('086) in view of Atalla United States Letter Patent Number 6,088,449 ('449) and in view of Satterfield United States Letter Patent Number 6,128,386 and further in view of Kaplan et al. United States Letter Patent Number 5,932,119.

As per claim 7 and 12

Atalla ('086), Atalla ('449) and Satterfield teach all the subject matter as discussed above. Neither of the references do not explicitly disclose a method wherein the unique image is a magnified image of an interior of a gem.

Kaplan et al. in analogous art, however, disclose a method wherein the unique image is a magnified image of an interior of a gem. (Col. 12, lines 36-47)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the method disclosed by Atalla ('086), Atalla ('449) and Satterfield to include a method wherein the unique image is a magnified image of an interior of a gem. This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so,

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as suggested by, Satterfield (Col. 8, lines 1-7) in order to provide an image that reflect each stone's varying characteristics, including the marking, details of the cut, and the relationship of the marking to the landmarks of the stone, the image serves as a fingerprint, making each stone essentially unique.

As per claim 9 and 14:

Atalla ('086), Atalla ('449) and Satterfield teach all the subject matter as discussed above. Neither of the references, however, explicitly teach a method wherein the unique sound event is a recording of a voice stating a phrase. (Col. 17, lines 11-26)

Kaplan et al. in analogous art, however, disclose a method wherein the unique sound event is a recording of a voice stating a phrase. (Col. 17, lines 11-26)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the method disclosed by Atalla ('086), Atalla ('449) and Satterfield to include a method wherein the unique sound event is a recording of a voice stating a phrase. This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so, as suggested by, Satterfield (Col. 17, lines 22-27) in order to provide a voice-command recognition system through a microphone, with verification of all input information and comment of operational sequence by a specific sequence.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shewaye Gelagay whose telephone number is 571-272-4219. The examiner can normally be reached on 8:00 am to 5:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on 571-272-3819. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shewaye Gelagay
Examiner
Art Unit 2133

12/24/04


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